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Rehabilitation Protocol for SLAP Repair

This protocol is designed to guide clinicians in managing the post-operative course following SLAP Repair-Type II. It operates on a time-dependent model, contingent on tissue healing, and is also based on specific criteria. It is important to note that the interventions recommended should be tailored to the individual's needs, considering examination findings and clinical judgment. The timeframes for expected outcomes outlined in this guideline may vary depending on the surgeon's preferences, additional procedures performed, and complications. In cases where a clinician requires guidance on the progression of post-operative care for a patient, consulting with the referring surgeon is advisable.

The interventions outlined in this protocol are not intended to be an exhaustive list. Therapeutic interventions should be included and adjusted based on the patient's progress and the clinician's discretion.

Factors to Consider in the Post-operative SLAP Repair Rehabilitation Program: Numerous variables can influence the outcome of post-operative SLAP repair rehabilitation, including the type of SLAP lesion, the size of the tear, the number of anchors placed, concomitant procedures, and the degree of shoulder hypermobility or hyperlaxity. It is important to consider the mechanism of injury and the specific sport or activity the patient intends to return to when determining the timing of certain interventions.

Post-operative Complications: Should you experience a fever, persistent numbness/tingling, excessive drainage from the incision, uncontrolled pain, or any other symptoms that raise concerns, it is crucial to contact Prof Imam's team for evaluation and guidance promptly.

PHASE I: IMMEDIATE POST-OP (0-3 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Protect surgical repair • Reduce swelling, minimize pain • Maintain UE ROM in elbow, hand and wrist • Gradually increase shoulder PROM • Minimize muscle inhibition • Patient education
Sling	• Neutral rotation • Use of abduction pillow in 30-45 degrees abduction • Use at night while sleeping

Precautions	• No shoulder AROM/AAROM • No elbow AROM (avoid biceps contraction) • No lifting of objects • No supporting of body weight with hands • No reaching behind back
Intervention	*Swelling Management* • Ice, compression *Range of motion/Mobility* • PROM: ER<30 scapular plane, Forward elevation <90, full elbow flex and ext, seated GH flexion table slide, horizontal table slide (add hyperlink) • AROM: hand, wrist • AAROM: none *Strengthening (Week 2)* • Periscapular: scap retraction*, prone scapular retraction*, standing scapular setting*, supported scapular setting, inferior glide, low row ○ *to neutral; avoid shoulder extension • Rotator cuff: submaximal pain-free isometrics • Ball squeeze
Criteria to Progress	• 90 degrees shoulder PROM forward elevation • 30 degrees of shoulder PROM ER in the scapular plane • Full elbow PROM flexion and extension • Palpable muscle contraction felt in scapular and shoulder musculature • No complications with Phase I

PHASE II: INTERMEDIATE POST-OP (4-6 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Continue to protect surgical repair • Reduce swelling, minimize pain • Gradually increase shoulder PROM • Minimize substitution patterns with shoulder AAROM • Initiate motor control exercise • Patient education
Sling	• Neutral rotation • Use of abduction pillow in 30-45 degrees abduction • Use at night while sleeping
Precautions	• No shoulder AROM • No elbow AROM (avoid biceps contraction) • No lifting of objects • No supporting of body weight with hands • No reaching behind back

Intervention **Continue with Phase I interventions*	*Range of motion/Mobility* • PROM: ER<45 scapular plane, Forward elevation <120 • AAROM: Active assistive shoulder flexion, shoulder flexion with cane, cane external rotation stretch, washcloth press, sidelying elevation to 90 degrees *Strengthening* • Periscapular: Row on physioball*, shoulder extension on physioball*, serratus punches ○ *to neutral; avoid shoulder extension *Motor Control* • Internal and external rotation in scaption and Flex 90-125 (rhythmic stabilization) *Stretching* • Sidelying horizontal ADD, sleeper stretch
Criteria to Progress	• 120 degrees shoulder PROM forward elevation • 45 degrees shoulder PROM ER in scapular plane • Minimal substitution patterns with shoulder AAROM • Pain < 4/10 • No complications with Phase II

PHASE III: INTERMEDIATE POST-OP CONT'd (7-8 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Do not overstress healing tissue Reduce • swelling, minimize pain • Gradually increase shoulder PROM/AAROM • Initiate shoulder and elbow AROM • Initiate RTC strengthening
	• Improve scapular muscle activation • Patient education
Sling	• Discontinue
Precautions	• No resisted elbow flexion • No lifting of heavy objects (>10 lbs)
Intervention **Continue with Phase I-II interventions*	*Range of motion/Mobility* • PROM: ER Full in scapular plane, □90 degrees ER in 90 degrees of abduction, IR Full in scapular plane, Forward elevation Full ○ *do not push beyond 90 degrees ER in 90 degrees of abduction • AAROM: seated shoulder elevation with cane, seated incline table slides, ball roll on wall • AROM: supine flexion, salutes, supine punch, wall climbs, elbow flexion *Strengthening* • Rotator cuff: side-lying external rotation, standing external rotation w/ resistance band, standing internal rotation w/ resistance band, internal rotation, external rotation • Periscapular: Resistance band shoulder extension*, resistance band seated rows*, rowing*, lawn mowers, robbery ○ *to neutral; avoid shoulder extension • Elbow: Triceps *Motor Control* • Quadruped alternating isometrics

Criteria to Progress	• Full pain-free shoulder PROM ER and forward elevation • Within 10 degrees of shoulder IR PROM of contralateral shoulder • Minimal substitution patterns with shoulder AROM • Pain < 4/10

PHASE IV: TRANSITIONAL POST-OP (9-12 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Do not overstress healing tissue • Restore full shoulder PROM and AROM • Initiate resisted elbow flexion at 12 weeks • Improve dynamic shoulder stability • Progress periscapular strength • Gradually return to full functional activities
Precautions	• No lifting of heavy objects (> 10 lbs)
Intervention **Continue with Phase II-III interventions*	*Range of motion/mobility* • PROM: Full • AROM: Supine forward elevation with elastic resistance to 90 deg, scaption and shoulder flexion to 90 degrees elevation *Strengthening* • Periscapular: Push-up plus on knees, prone shoulder extension Is*, resistance band forward punch, forward punch, tripod ○ *to neutral; avoid shoulder extension • Elbow (12 weeks): Biceps curl, resistance band bicep curls *Motor control* • Ball stabilization on wall *Stretching* • Hands behind head, IR behind back with towel, triceps and lats, doorway series
Criteria to Progress	• Full pain-free shoulder PROM and AROM • Minimal to no substitution patterns with shoulder AROM • Performs all exercises demonstrating symmetric scapular mechanics • Pain < 2/10

PHASE V: LATE POST-OP (13-16 WEEKS AFTER SURGERY)

Rehabilitation Goals	• Maintain pain-free shoulder ROM • Enhance functional use of upper extremity
Intervention **Continue with Phase II-IV interventions*	*Strengthening* • Rotator cuff: External rotation at 90 degrees, internal rotation at 90 degrees, resistance band standing external rotation at 90 degrees, resistance band standing internal rotation at 90 degrees • Periscapular: T and Y, "T" exercise, push-up plus knees extended, pointer, wall push up, "W" exercise, resistance band Ws, dynamic hug, resistance band dynamic hug *Motor Control* • PNF – D1 diagonal lifts, PNF – D2 diagonal lifts, field goals , resistance band PNF pattern, PNF – D1 diagonal lifts w/ resistance, diagonal-up, diagonal-down, wall slides w/ resistance band

Criteria to Progress	• Clearance from MD and ALL milestone criteria below have been met • Full pain-free shoulder PROM and AROM • ER/IR strength minimum 85% of the uninvolved arm • ER/IR ratio 60% or higher • Negative impingement and instability signs • Performs all exercises demonstrating symmetric scapular mechanics • QuickDASH • PENN

PHASE VI: EARLY RETURN-TO-SPORT (4-6 MONTHS AFTER SURGERY)

Rehabilitation Goals	• Maintain pain-free ROM • Continue strengthening and motor control exercises • Enhance functional use of upper extremity • Gradual return to strenuous work/sport activity
Intervention **Continue with Phase II-V interventions*	*Strengthening* • See specific return-to-sport/throwing program (coordinate with physician)
Criteria to Progress	• Last stage-no additional criteria
Return-to-Sport	• For the recreational or competitive athlete, return-to-sport decision making should be individualized and based upon factors including level of demand on the upper extremity, contact vs non-contact sport, frequency of participation, etc. We encourage close discussion with the referring surgeon prior to advancing to a return-to-sport rehabilitation program.

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Contact	Please email Info@TheArmDoc.co.uk with questions specific to this protocol

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